

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-49. (Cancelled)

50. (New) A communication system comprising:

a satellite;

a plurality of user terminals, each of the plurality of user terminals being operative to communicate with the satellite;

a gateway being operative to communicate with the satellite; and

a controller operative to dynamically and asymmetrically assign uplink bandwidth between the plurality of user terminals and the gateway via a signaling channel, the signaling channel being transmitted from the controller to the plurality of user terminals and to the gateway via the satellite.

51. (New) The communication system of claim 50, wherein the controller dynamically assigns the uplink bandwidth based on a ratio of outbound to inbound communication traffic, a utilization efficiency of uplinks associated with the plurality of user terminals and the gateway, a utilization efficiency of downlinks associated with the plurality of user terminals and the gateway, a ratio of relative capacity of the uplinks associated with the plurality of user terminals and the gateway to the downlinks associated with the plurality of user terminals and the gateway, and a number of available uplinks and available downlinks.

52. (New) The communication system of claim 50, wherein the controller is further operative to monitor communication traffic flow between the gateway and the plurality of user terminals, the controller dynamically assigning the uplink bandwidth based on an evaluation of the monitored communication traffic flow.

53. (New) The communication system of claim 50, wherein the controller assigns a plurality of uplinks to the plurality of user terminals and to the gateway for communication with the satellite, each of the plurality of uplinks having an associated bandwidth.

54. (New) The communication system of claim 53, wherein the controller assigns a portion of the plurality of uplinks to the plurality of user terminals and a remaining portion of the plurality of uplinks to the gateway based on a determination of an optimal allocation of the plurality of uplinks.

55. (New) The communication system of claim 53, wherein each of the plurality of uplinks comprises a plurality of sub-channels, such that a portion of the plurality of sub-channels of a given one of the plurality of uplinks is assigned to at least one of the plurality of user terminals and a remaining portion of the plurality of sub-channels is assigned to the gateway.

56. (New) A method for establishing communications with a satellite, the method comprising:
monitoring communication traffic flow between a gateway and a plurality of user terminals;

determining an optimal allocation of uplink bandwidth between the gateway and the plurality of user terminals based on an evaluation of the monitored communication traffic flow;

assigning a first portion of the uplink bandwidth dynamically to the gateway; and

assigning a second portion of the uplink bandwidth dynamically to the plurality of user terminals.

57. (New) The method of claim 56, further comprising transmitting a signaling channel to the plurality of user terminals and to the gateway via the satellite, the signaling channel comprising the assignment of the first and second portions of the uplink bandwidth.

58. (New) The method of claim 56, wherein the determining an optimal allocation of the uplink bandwidth comprises determining the optimal allocation of the uplink bandwidth based on a ratio of outbound to inbound communication traffic, a utilization efficiency of uplinks associated with the plurality of user terminals and the gateway, a utilization efficiency of downlinks associated with the plurality of user terminals and the gateway, a ratio of relative capacity of the uplinks associated with the plurality of user terminals and the gateway to the downlinks associated with the plurality of user terminals and the gateway, and a number of available uplinks and available downlinks.

59. (New) The method of claim 56, wherein the assigning the first and second portions of the uplink bandwidth comprises assigning a plurality of uplinks to the plurality of user terminals and to the gateway for communication with the satellite, each of the plurality of uplinks having an associated bandwidth.

60. (New) The method of claim 59, wherein the assigning the first and second portions of the uplink bandwidth comprises assigning a portion of the plurality of uplinks to the plurality of user terminals and assigning a remaining portion of the plurality of uplinks to the gateway based on the determined optimal allocation of the uplink bandwidth.

61. (New) The method of claim 59, wherein each of the plurality of uplinks comprises a plurality of sub-channels, and wherein assigning the first and second portions of the uplink bandwidth comprises assigning a portion of the plurality of sub-channels of a given one of the plurality of uplinks to at least one of the plurality of user terminals, and assigning a remaining portion of the plurality of sub-channels to the gateway.

62. (New) A communication system comprising:

a satellite;

a plurality of user terminals, each of the plurality of user terminals being operative to communicate with the satellite;

a gateway being operative to communicate with the satellite; and

a controller operative to dynamically assign a plurality of uplinks to the plurality of user terminals and to the gateway for communication with the satellite, each of the plurality of uplinks having an associated bandwidth, such that a portion of the plurality of uplinks is assigned to the plurality of user terminals and a remaining portion of the plurality of uplinks is assigned to the gateway, the assignment being based on a determination of an optimal allocation of the plurality of uplinks.

63. (New) The communication system of claim 62, the controller being further operative to transmit the assignment of the plurality of uplinks via a signaling channel, the signaling channel being transmitted from the controller to the plurality of user terminals and to the gateway via the satellite.

64. (New) The communication system of claim 62, wherein the controller dynamically assigns the plurality of uplinks based on a ratio of outbound to inbound communication traffic, a utilization efficiency of the plurality of uplinks, a utilization efficiency of downlinks associated with the plurality of user terminals and the gateway, a ratio of relative capacity of the plurality of uplinks to the downlinks associated with the plurality of user terminals and the gateway, and a number of available uplinks and available downlinks.

65. (New) The communication system of claim 62, wherein the controller is further operative to monitor communication traffic flow between the gateway and the plurality of user terminals, the controller dynamically assigning the plurality of uplinks based on an evaluation of the monitored communication traffic flow.

66. (New) The communication system of claim 62, wherein each of the plurality of uplinks comprises a plurality of sub-channels, such that a portion of the plurality of sub-channels of a given one of the plurality of uplinks is assigned to at least one of the plurality of user terminals and a remaining portion of the plurality of sub-channels is assigned to the gateway.

67. (New) A communication system comprising:

means for determining an optimal allocation of uplink bandwidth between a gateway and a plurality of user terminals based on at least one of a ratio of outbound to inbound communication traffic, a utilization efficiency of uplinks associated with the plurality of user terminals and the gateway, a utilization efficiency of downlinks associated with the plurality of user terminals and the gateway, a ratio of relative capacity of the uplinks associated with the plurality of user terminals and the gateway to the downlinks associated with the plurality of user terminals and the gateway, and a number of available uplinks and available downlinks; and

means for dynamically assigning a first portion of the uplink bandwidth to the gateway and for dynamically assigning a second portion of the uplink bandwidth to the plurality of user terminals for communicating with a satellite.

68. (New) The communication system of claim 67, further comprising means for communicating the assignment of the first portion of the uplink bandwidth and the second portion of the uplink bandwidth to the to the plurality of user terminals and to the gateway.

69. (New) The communication system of claim 67, further comprising means for determining an optimal allocation of a plurality of uplinks between the gateway and the plurality of user terminals, the means for dynamically assigning the uplink bandwidth assigning a portion of the plurality of uplinks to the plurality of user terminals and a remaining portion of the plurality of uplinks to the gateway based on the determination of the optimal allocation of the plurality of uplinks.

70. (New) The communication system of claim 69, wherein each of the plurality of uplinks comprises a plurality of sub-channels, such that a portion of the plurality of sub-channels of a given one of the plurality of uplinks is assigned to at least one of the plurality of user terminals and a remaining portion of the plurality of sub-channels is assigned to the gateway.